12/9/8 (Item 8 from file: 275)
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01212326 SUPPLIER NUMBER: 04960822 (THIS IS THE FULL TEXT)
Using PCs from afar with connectivity software. (connectivity section)
(buyers quide)

Van Name, Mark L.; Catchings, Bill

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As the volume and importance of information and programs stored on office PCs grows, users who are away from their desks are finding themselves more frequently pining for access to the home-base machine. Sometimes portable PCs can satisfy the computing needs of these users, but this approach forces them to keep two PCs in identical states at all times, a potentially difficult task and one requiring more discipline than harried users might have handy. Even if the worker is willing, some data on office machines is sensitive and generally not allowed out of the office. The lap-top remains and adjunct to, rather than a copy of, the contents and power of a desktop PC.

Now, a class of programs known as connectivity software is emerging that offers these users access to their PCs from remote locations.

Connectivity software is any program that allows a PC to act as a host computer, so that a user at another PC (or terminal), regardless of location, can gain access to a "significant" portion of the host PC's resources over phone lines. Some products require that the remote user work on a second PC, while others allow either a PC or a terminal to be used. When linked with these packages, remote users can direct the host in such PC tasks as program execution and file transfer virtually as if they were sitting at their desks.

In essence, connectivity software turns the relationship between two PCs or a PC and a terminal with modems into a host-node relationship, much like those common in mainframe of minicomputers that respond to requests from a node by sending files, accepting commands and other interactions.

There are a variety of uses for connectivity software. The most obvious is simple remote computing, the operation of the host PC from a remote location. In these operations, the remote PC actually takes over and demands services from the host.

Sales executives visiting a client may desire access to a central database to check on product inventory, monitor the status of a previous order and enter new orders. Managers working at home can retrieve information or send reports to a printer in the office.

Another common use is for remote diagnostics. A central technical-support desk can use the remote package to dial into either a single PC or into a LAN to diagnose a problem. When remote workers can't get an application to run, they can watch as someone at the home base works on their problem.

Training programs may also benefit from remote access so that a trainer can tutor people remotely and cut down on travel time and expense. These tasks differ from remote computing, in that the remote PC's

role is as spectator, not director. They allow the person on the remote PC to work with the user on the host PC by following his every action, in essence "watching over his shoulder" from afar. This idea can be extended to "teleconferencing," in which users at different sites exchange messages and demonstrate applications to one another by sending information between their PCs.

One of the toughest problems confronting connectivity-software products is screen management. Executing a program on the host PC is not very difficult. It is similar to the problem facing larger hosts that must support remote terminals. But getting the on-screen results of such programs transmitted from the host PC to the remote PC can be much mor difficult. Larger hosts, such as minicomputers, typically must support screen output by simply sending as sequence of ASCII characters. PC programs often do not use such a well-controlled communication channel, and instead send output directly to the screen, in no particular order, so manipulation is necessary to transmit those characters in order.

Some older products or those with relatively modest screen-interaction requirements—such as COMMAND.COM, the contral program of DOS, as well as many compilers and linkers—only transmit characters to the screen via MS-DOS routines. Remote communication with such programs is relatively easy to implement. The communication program can replace the MS-DOS functions with its own routines and intercept the characters being sent to the screen. It then can send those characters both to the screen of the host PC and, via a serial port, to the remote system.

Unfortunately, this approach will not work with most PC software. Long ago many software developers found that DOS handles screen output very slowly. To get around this problem, they built their products to write their output directly to the memory locations that control the screen.

More sophisticated remote-computing programs can handle even these direct-screen writes. They do so by checking the screen image periodically to see if it has changed. When they detect a change, the new screen image is sent to the remote user. This check can be time-consuming, so some programs allow the user to set the frequency with which it is performed. More frequent checks can bog down the system, but they keep the remote user current. Checking less often improves performance, but can result in the remote user staying behind the actual state of the display. Users must balance these trade-offs in setting the frequency of this screen test.

The problem of keeping the screen image on the remote PC current becomes even more difficult when the application being run uses the graphics capabilities of the PC. The amount of data that is necessary to represent a graphical image is several times larger than that required to produce a display involving only characters.

Regardless of the extra cost associated with displaying graphical images, their importance is growing. While once only obvious graphics applications like AutoCAD displayed graphics, today many other programs, such as Windows, are relying heavily on graphics.

The connectivity-software products that do send graphical images, however, do not rely on the same methods used to transmit text. The cost of transmitting the extra information forces them to send only periodic "snapshots" of the screen rather than real-time updates.

The biggest problem that users encounter in screen transmission is poor performance. Even when a package allows a remote user to run a program on a host PC, the speed of the connection can make such activity impractical.

The major bottleneck is the speed of today's modems. The typical 1,200-bit-per-second (bps) or 2,400-bps modem may sound fast, but at 1,200 bps it can take from 10 to 30 seconds to transmit a complete screen. While the 2,400-bps modems cut this time in half, the wait for the screen to refresh can seem quite long.

Newer, high-speed modems, with their transfer rates of 4,800 bps, 9,600 bps or higher, seem to promise improved performance for connectivity-software products. Unfortunately, they probably are not suitable for many types of remote computing. While their transfer rates seem high, they achieve these speeds by bundling groups of characters into single transmissions. This tactic forces them to delay sending data until either they have enough characters to fill a bundle or a few seconds have passed. Thus, complete screen transmissions get faster, but those that

involve only a few characters, such as echoing user keystrokes, actually can slow down.

These newer modems, unlike the 1,200-and 2,400-bps products, work best when they send characters in only one direction at a time. Because of this, typing while the screen is being updated can slow down that process. Finally, many users experience a fairly large number of errors when using these modems with most remote-computing packages.

Another performance problem can arise because these connectivity programs run while other applications are executing. The combined load on the CPU may leave it unable to keep up with the high-speed modems.

Connectivity-software products do not all rely on the same strategy to address these performance problems. One way to get higher throughput is by having complementary connectivity-software programs running on both PCs. Close-Up, from Norton-Lambert Corp., and Carbon Copy Plus, from Meridian Technology, rely on this approach.

Because the complementary programs are designed to work together, they can use such performance-improvement techniques as data compression. Another approach is the one followed by In-Synch, from American Video Teleconferencing Corp., in which less data is sent between the systems. Only the keystrokes, and not the screen images, need to be transmitted. (See related story, Page C/22, for more information.)

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Products that execute complementary programs on both machines also offer improved error-checking. They usually communicate using a protocol that is designed to prevent errors. This ability can be important because of possible errors caused by the excessive noise level of many telephone lines. These errors can cause loss of a single character, which can make a major difference in the meaning of a screen. When the cost of refreshing the entire screen is high, it is particularly important to avoid errors that might require users to re-execute this costly action.

Terminals Involved

Such performance-enhancing approaches assume that two PCs are being used. Because one PC is acting as a host computer, it could send its output not just to other PCs but to terminals as well. This feature, offered by Remote, from Crosstalk Communications, and PC Anywhere, from Dynamic Microprocessor Associates, and others, allows those users who already have terminals, notably those working with minicomputers, to work with PCs. Further, if the only goal is to provide remote computing, there is the added advantage that most terminals are cheaper than PCs.

This approach has the disadvantage that many terminals have different capabilities than PCs. One of the most common differences is in the screen attributes, such as the fact that most terminals display just 24 lines rather than the PC's 25, and in the behavior of the keyboard. Keyboard layouts and the characters sent by special keys tend to differ. There are ways to avoid or circumvent most of these problems, but they make remote use of the PC more cumbersome than is normal.

Wyse Technology and some other terminal manufacturers are addressing this issue by providing terminals that are PC compatible. These terminals have at least 25 lines and support the same screen-control-character sequences offered by the MS-DOS screen driver, ANSI.SYS. Their keyboards resemble normal PC keyboards and send the same sequences for each key, including function keys.

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Another feature that may help some users is the ability to remotely access mainframes or minicomputers through the host PC. Carbon Copy Plus supports both the Digital Communications Associates' IRMA 3270 and Smart Alec 5251 terminal-emulation boards so that the remote PC user can access the minicomputer or mainframe system using the IRMA or Smart Alec card attached to the host PC.

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Photo: Traveling salesmen and executives find that remote-access software allows them to tap into rresources that are located in the home office.

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SPECIAL FEATURES: illustration; chart; table

DESCRIPTORS: Connectivity; Software Packages; Data Communications

Software; Microcomputer; Software Design; Comparison; Laptop/Portable

Computer

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Computer

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File 696:DIALOG Telecom. Newsletters 1995-2004/Jul 20 (c) 2004 The Dialog Corp. NV.L. File 15:ABI/Inform(R) 1971-2004/Jul 21 (c) 2004 ProQuest Info&Learning File 98:General Sci Abs/Full-Text 1984-2004/Jun (c) 2004 The HW Walson Co. File 141:Readers Guide 1983-2004/Jun (c) 2004 The HW Wilson Co File 484:Periodical Abs Plustext 1986-2004/Jul W1 (c) 2004 ProQuest File 813:PR Newswire 1987-1999/Apr 30 (c) 1999 PR Newswire Association Inc File 613:PR Newswire 1999-2004/Jul 21 (c) 2004 PR Newswire Association Inc File 635:Business Dateline(R) 1985-2004/Jul 20 (c) 2004 ProQuest Info&Learning File 810:Business Wire 1986-1999/Feb 28 (c) 1999 Business Wire File 610:Business Wire 1999-2004/Jul 21 (c) 2004 Business Wire. File 369: New Scientist 1994-2004/Jul W2 (c) 2004 Reed Business Information Ltd. File 370:Science 1996-1999/Jul W3 (c) 1999 AAAS 20:Dialog Global Reporter 1997-2004/Jul 21 (c) 2004 The Dialog Corp. File 624:McGraw-Hill Publications 1985-2004/Jul 20 (c) 2004 McGraw-Hill Co. Inc File 634:San Jose Mercury Jun 1985-2004/Jul 20 (c) 2004 San Jose Mercury News File 647:CMP Computer Fulltext 1988-2004/Jul W2 (c) 2004 CMP Media, LLC File 674:Computer News Fulltext 1989-2004/Jun W4 (c) 2004 IDG Communications Set Items Description S1 1579644 AUTOMAT???? ? OR AUTOMATIC????? ? S2 3562485 INDEPENDENT? 3310452 IMAGE OR IMAGES OR GRAPHIC?? ? OR VIDEO? ? OR VIDEODATA OR VIDEOCLIP? OR VIDEOFRAME? OR VIDEOFILE? OR VIDEOIMAGE? **S4** 1675929 AV OR AUDIOVISUAL? OR AUDIO() VISUAL? ? OR AVI OR MOVIECLIP? OR MOVIE? ? OR FILM? ? OR FILMSTRIP? OR FILMCLIP? OR IMAGEFI-LE? S5 772575 AVIFILE? OR MULTIMEDIA? OR POLYMEDIA? OR HYPERMEDIA? OR SM-ARTMEDIA? OR RICHMEDIA? OR MIXEDMEDIA? 101158 (MULTI OR MULTIPLE OR POLY OR HYPER OR SMART OR RICH OR MI-XED OR DIVERSE) () (MEDIA OR MEDIAS OR MEDIUM? ? OR CONTENT? ?) **S7** 529466 OBJECT? ? S8 6572551 PHOTOGRAPH?? ? OR PICTURE? ? OR PICTORIAL? OR PHOTO? ? OR -DRAWING? ? OR ILLUSTRATION? OR DESIGN? ? OR LOGO? ? 269414 S9 S3:S8(3N) (CAPTUR? OR SAVE? ? OR SAVING OR STORING OR STORA-GE OR STORE? ? OR ARCHIV? OR CACHE? ? OR CACHING OR SUBCACH?) S10 66930 S3:S8(3N)(COLLECT????? ? OR CUMULAT? OR ACCUMULAT? OR STOW?-S11 S3:S8(3N)(DEPOSITORY? OR DEPOSITORIES OR REPOSITORY? OR RE-POSITORIES) S12 5907613 COMPAR? OR MATCH? OR MISMATCH? . S13 4112 \$9:S11(5N)S1:S2 CHRONOLOG? OR SEQUENT? OR SEQUENC? OR SERIAL? OR CONSECUTI-VE? OR SUCCESSION? OR SUCCESSIVE? OR SERIES 494 S9:S11(5N)'IN'()ORDER

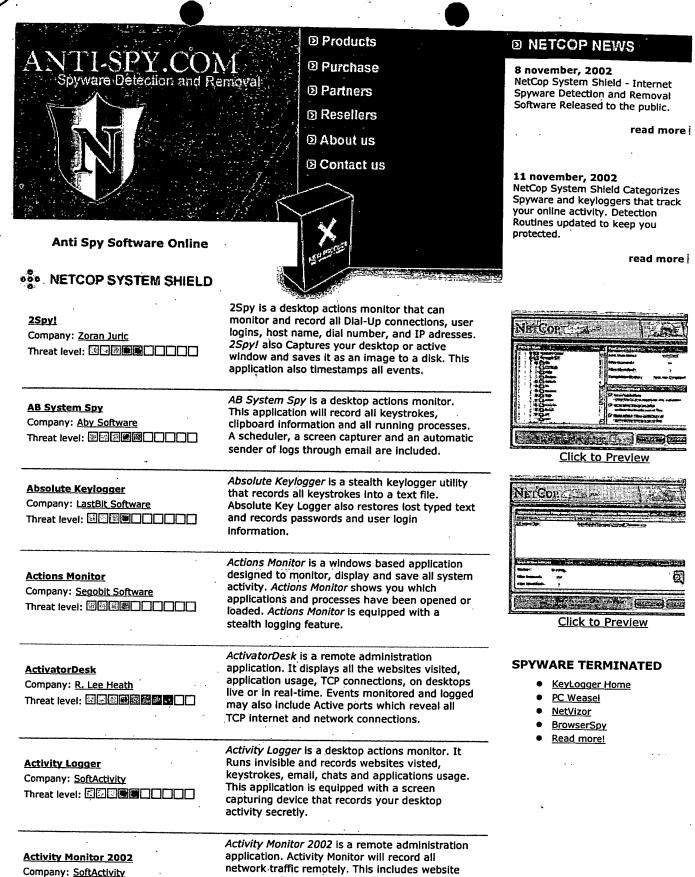
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 File 47:Gale Group Magazine DB(TM) 1959-2004/Jul 21
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File 636: Gale Group Newsletter DB(TM) 1987-2004/Jul 21
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File 649: Gale Group Newswire ASAP(TM) 2004/Jul 19
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                S10:S11(3N)(CAPTUR? OR SAVE? ? OR SAVING OR STORING OR STO-
             RAGE OR STORE? ? OR ARCHIV? OR CACHE? ? OR CACHING OR SUBCACH-
S13
         6723
                S10:S11(3N) (DEPOSITORY? OR DEPOSITORIES OR REPOSITORY? OR -
             REPOSITORIES)
S14
        44633
                S10:S11(3N)(COLLECT????? ? OR CUMULAT? OR ACCUMULAT? OR STO-
            M333 3)
S15
      5003594
                COMPAR? OR MATCH? OR MISMATCH?
S16
         9100
                (S7:S9 OR S12:S14) (5N) S1:S2
      3398023
S17
                CHRONOLOG? OR SEQUENT? OR SEQUENC? OR SERIAL? OR CONSECUTI-
             VE? OR SUCCESSION? OR SUCCESSIVE? OR SERIES
S18
               (S7:S9 OR S12:S14)(5N)'IN'()ORDER
          781
S19
         4584
                (S7:S9 OR S12:S14) (5N) S17
S20
               -S16(S)S18:S19
         122
S21
        40530
                S15(3N)S3:S6
S22
            2
                S20(S)S21
S23
                RD (unique items)
           1
S24
          .32
                S20/2001:2004
S25
           88
                S20 NOT (S24 OR S22)
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(c) 2004 European Patent Office
 File 349:PCT Fulltext 1979-2002/UB=20040708,UT=2004070
          (c) 2004 WIPO/Univentio
                                                              Patinas
Rullupt
 Set .
         Items
                 Description
 S1
        406834
                 AUTOMAT???? ? OR AUTOMATIC????? ?
 S2
        397751
                 INDEPENDENT?
S3
        526114
                 IMAGE OR IMAGES OR GRAPHIC?? ? OR VIDE
              VIDEOCLIP? OR VIDEOFRAME? OR VIDEOFILE? O
        364056
                 AV OR AUDIOVISUAL? OR AUDIO() VISUAL? ?
               OR MOVIE? ? OR FILM? ? OR FILMSTRIP? OR
S5
         22394
                 AVIFILE? OR MULTIMEDIA? OR POLYMEDIA? OR HYPERMEDIA? OR SM-
              ARTMEDIA? OR RICHMEDIA? OR MIXEDMEDIA?
S6
                 (MULTI OR MULTIPLE OR POLY OR HYPER OR SMART OR RICH OR MI-
              XED OR DIVERSE) () (MEDIA OR MEDIAS OR MEDIUM? ? OR CONTENT? ?)
S7
        717132
                 OBJECT? ?
S8
       1165849
                 PHOTOGRAPH?? ? OR PICTURE? ? OR PICTORIAL? OR PHOTO? ? OR -
              DRAWING? ? OR ILLUSTRATION? OR DESIGN? ? OR LOGO? ?
S9
                 S3:S8(3N)(CAPTUR? OR SAVE? ? OR SAVING OR STORING OR STORA-
              GE OR STORE? ?: OR ARCHIV? OR CACHE? ? OR CACHING OR SUBCACH?)
S10
                 S3:S8(3N)(COLLECT????? ? OR CUMULAT? OR ACCUMULAT? OR STOW?-
S11
          1023
                 S3:S8(3N) (DEPOSITORY? OR DEPOSITORIES OR REPOSITORY? OR RE-
              POSITORIES)
S12
        848022
                 COMPAR? OR MATCH? OR MISMATCH?
S13
          2235
                 S9:S11(5N)S1:S2
S14
       824189
                 CHRONOLOG? OR SEQUENT? OR SEQUENC? OR SERIAL? OR CONSECUTI-
              VE? OR SUCCESSION? OR SUCCESSIVE? OR SERIES
S15
          2484
                 S9:S11(5N)'IN'()ORDER
S16
          6139
                 S9:S11(5N)S14
S17
          108
                 S13(25N)S15:S16
S18
        80587
                 S12(5N)S3:S8
S19
            1
                 S17 (25N) S18
S20
           14
                 S17/TI, AB, CM
S21
        45274
                 IC='G06F-017'
S22
         6963
                 IC='G06F-012'
S23
         4194
                 IC='G06F-007'
S24
           11
                 S17 AND S21:S23
S25
           43
                 S17 AND S9:S11/TI, AB
S26
           54
                S19:S20 OR S24:S25
           54
S27
                IDPAT (sorted in duplicate/non-duplicate order)
S28
           53
                 IDPAT (primary/non-duplicate records only)
S29
         8900
                 IC='G03B'
               S17 NOT (S29 OR S27 OR S19)
S30 NOT (CAMERA? ? OR CCD)
S30
           53
S31
           18
S32
        18731
                S3:S8(3N)(DOWNLOAD? OR (UP OR DOWN)()LOAD??? ? OR UPLOAD? -
             OR ACQUIR? OR ACQUISITION?)
S33
          696
                S32 (5N) S1:S2
S34
            3
                S33(25N)S15:S16
S35
                S34 NOT (S30 OR S19 OR S27)
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File 348: EUROPEAN PATENTS 1978-2004/Jul W02

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File 347: JAPIO Nov 1976-2004/Mar(Updated 040708)
            (c) 2004 JPO & JAPIO
                                                                    abstracts
  File 350: Derwent WPIX 1963-2004/UD, UM &UP=200445
           (c) 2004 Thomson Derwent.
  Set
          Items
                  Description
  S1
        1063457
                  AUTOMAT???? ? OR AUTOMATIC????? ?
  S2
        1450489
                  INDEPENDENT?
 S3
        1541999
                  IMAGE OR IMAGES OR GRAPHIC?? ? OR VIDEO? ?
               VIDEOCLIP? OR VIDEOFRAME? OR VIDEOFILE? OR VIDEOIMAGE?
 S4
        1396131
                  AV OR AUDIOVISUAL? OR AUDIO() VISUAL? ? OR AVI OR MOVIECLIP?
                OR MOVIE? ? OR FILM? ? OR FILMSTRIP? OR FILMCLIP? OR IMAGEFI-
               LE?
          17391
                  AVIFILE? OR MULTIMEDIA? OR POLYMEDIA? OR HYPERMEDIA? OR SM-
               ARTMEDIA? OR RICHMEDIA? OR MIXEDMEDIA?
 S6
                  (MULTI OR MULTIPLE OR POLY OR HYPER OR SMART OR RICH OR MI-
               XED OR DIVERSE) () (MEDIA OR MEDIAS OR MEDIUM? ? OR CONTENT? ?)
 S7
        472233
                  OBJECT? ?
 S8
       3849527
                  PHOTOGRAPH?? ? OR PICTURE? ? OR PICTORIAL? OR PHOTO? ? OR -
               DRAWING? ? OR ILLUSTRATION? OR DESIGN? ? OR LOGO? ?
 S9
                 S3:S8(3N)(CAPTUR? OR SAVE? ? OR SAVING OR STORING OR STORA-
              GE OR STORE? ? OR ARCHIV? OR CACHE? ? OR CACHING OR SUBCACH?)
 S10
                 S3:S8(3N)(COLLECT?????? ? OR CUMULAT? OR ACCUMULAT? OR STOW?-
               ?? ?)
 S11
                 S3:S8(3N) (DEPOSITORY? OR DEPOSITORIES OR REPOSITORY? OR RE-
           205
              POSITORIES)
 S12
       1147990
                 COMPAR? OR MATCH? OR MISMATCH?
 S13
          2287
                 S9:S11(5N)S1:S2
 S14
                 CHRONOLOG? OR SEQUENT? OR SEQUENC? OR SERIAL? OR CONSECUTI-
       1254155
              VE? OR SUCCESSION? OR SUCCESSIVE? OR SERIES
 S15
           547
                 S9:S11(5N)'IN'()ORDER
 S16
          4224
                 S9:S11(5N)S14
 S17
         19586
                 S3:S8(3N)(DOWNLOAD? OR (UP OR DOWN)()LOAD??? ? OR UPLOAD? -
              OR ACQUIR? OR ACQUISITION?)
 S18
           403
                 S17(5N)S1:S2
S19
             3
                 S18 AND S15:S16
 S20
            84
                 S13 AND S15:S16
S21
            87
                 S19:S20
S22
        284081
                 IC='G06F-017'
S23-
         44989
                 IC='G06F-007'
S24
        105883
                 IC='G06F-012'
S25
          8029
                 MC='T01-N01A2C'
S26
           513
                 MC='W05-E03E'
S27
        17205
                 MC='T01-J05A2'
S28
         8780
                 MC='T01-H07C5E'
S29
             0
                 S21 AND S27 AND S28
S30
            9
                 S21 AND S22:S26
S31
          64
                 S21 NOT (CAMERA? OR CCD)
S32
           65
S33
            65
                 IDPAT (sorted in duplicate/non-duplicate order)
S34
                 IDPAT (primary/non-duplicate records only)
           64
? t34/9/12-13,32,37,40,49-50
 34/9/12
              (Item 12 from file: 350)
DIALOG(R) File 350: Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.
014392535
             **Image available**
WPI Acc No: 2002-213238/200227
XRPX Acc No: N02-163202
 Video data acquisition device e.g. personal computer extracts image data
```

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6:NTIS 1964-2004/Jul W3
 File .
          (c) 2004 NTIS, Intl Cpyrght All Rights Res
 File
        2:INSPEC 1969-2004/Jul W2
          (c) 2004 Institution of Electrical Engineers
 File
        8:Ei Compendex(R) 1970-2004/Jul W2
          (c) 2004 Elsevier Eng. Info. Inc.
 File 256:SoftBase:Reviews,Companies&Prods. 82-2004/Jun
                                                                NO L
Mostrats
          (c)2004 Info.Sources Inc
 File
       34:SciSearch(R) Cited Ref Sci 1990-2004/Jul W2
          (c) 2004 Inst for Sci Info
 File
       35:Dissertation Abs Online 1861-2004/May
          (c) 2004 ProQuest Info&Learning
 File
       65:Inside Conferences 1993-2004/Jul W3
          (c) 2004 BLDSC all rts. reserv.
File
       94:JICST-EPlus 1985-2004/Jun W4
          (c) 2004 Japan Science and Tech Corp(JST)
File
      95:TEME-Technology & Management 1989-2004/Jun W1
          (c) 2004 FIZ TECHNIK
File
      99:Wilson Appl. Sci & Tech Abs 1983-2004/Jun
          (c) 2004 The HW Wilson Co.
File 111:TGG Natl.Newspaper Index(SM) 1979-2004/Jul 20
          (c) 2004 The Gale Group
File 144: Pascal 1973-2004/Jul W2
          (c) 2004 INIST/CNRS
File 202:Info. Sci. & Tech. Abs. 1966-2004/Jul 12
          (c) 2004 EBSCO Publishing
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          (c) 2003 EBSCO Pub.
File 266: FEDRIP 2004/May
         Comp & dist by NTIS, Intl Copyright All Rights Res
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          (c) 1998 Inst for Sci Info
File 483: Newspaper Abs Daily 1986-2004/Jul 20
          (c) 2004 ProQuest Info&Learning
File 583:Gale Group Globalbase(TM) 1986-2002/Dec 13
          (c) 2002 The Gale Group
File 603: Newspaper Abstracts 1984-1988
         (c) 2001 ProQuest Info&Learning
Set
        Items
                Description
S1
      1538839
                AUTOMAT???? ? OR AUTOMATIC????? ?
S2
      1335707
                INDEPENDENT?
s3
                IMAGE OR IMAGES OR GRAPHIC?? ? OR VIDEO? ? OR VIDEODATA OR
             VIDEOCLIP? OR VIDEOFRAME? OR VIDEOFILE? OR VIDEOIMAGE?
S4
                AV OR AUDIOVISUAL? OR AUDIO() VISUAL? ? OR AVI OR MOVIECLIP?
              OR MOVIÉ? ? OR FILM? ? OR FILMSTRIP? OR FILMCLIP? OR IMAGEFI-
             J.F.?
S5
       212192
               AVIFILE? OR MULTIMEDIA? OR POLYMEDIA? OR HYPERMEDIA? OR SM-
             ARTMEDIA? OR RICHMEDIA? OR MIXEDMEDIA?
S6
                (MULTI OR MULTIPLE OR POLY OR HYPER OR SMART OR RICH OR MI-
             XED OR DIVERSE) () (MEDIA OR MEDIAS OR MEDIUM? ? OR CONTENT? ?)
S7
       967503
                OBJECT? ?
S8
      5925584
                PHOTOGRAPH?? ? OR PICTURE? ? OR PICTORIAL? OR PHOTO? ? OR -
             DRAWING? ? OR ILLUSTRATION? OR DESIGN? ? OR LOGO? ?
S9
                S3:S8(3N) (CAPTUR? OR SAVE? ? OR SAVING OR STORING OR STORA-
             GE OR STORE? ? OR ARCHIV? OR CACHE? ? OR CACHING OR SUBCACH?)
S10
        40230
                S3:S8(3N) (COLLECT???? ? OR CUMULAT? OR ACCUMULAT? OR STOW?-
S11
         3000
                S3:S8(3N) (DEPOSITORY? OR DEPOSITORIES OR REPOSITORY? OR RE-
             POSITORIES)
```



usage, application usage, internet connections

with a real time remote viewer.

and keystrokes. Activity Monitor comes equipped

Threat level:

```
File 347: JAPIO Oct 19
                                     dated 031105)
           (c) 2003 JPO & JAPIO
 File 350: Derwent WPIX 1963-200 /U UM & UP=200373
           (c) 2003 Thomson Deriven
          Items
                  Description
 S1
       2352511
                  MULTIMEDIA OR MEDIA OR IMAGE? ? OR PHOTO? ? OR PHOTOGRAPH?
               ? OR PICTURE? OR GRAPHIC? ? OR SCREEN? ? OR CONTENT
 S2
                 WEBPAGE? ? OR PAGE? ? OR WEBSITE? ? OR SITE? ? OR AD OR ADS
               OR ADVERTIS??? OR ADVERTISEMENT? ? OR PROMOTION?? OR BANNER?
 S3
        103533
                 DIALOG() (BOX OR BOXES) OR (POPUP OR POP????()UP) (3N) (BOX OR
               BOXES OR NOTICE OR NOTICES OR NOTIFICATION? ? OR ALERT? ?) OR
               MESSAGE? ?
 S4
        249207
                 S1:S3(5N) (CAPTUR? OR RECORD??? OR SAV??? OR GRAB???? OR CO-
              PY??? OR COPIE? ? OR SNAPSHOT? ? OR SNAP()SHOT? ? OR SCREENSH-
              OT? ? OR SCREEN()SHOT? ? OR SCREENCAPTUR??? OR ACQUIR? OR ACQ-
              UISITION? ? OR TAK???(2W)PICTURE? ?)
 S5
          2637
                 S4(5N)(PERIOD? OR INTERVAL? ? OR TIMES OR EVERY(1W)OFTEN)
 S6
                 (CHANG? OR NEW) (5N) (CONTENT OR MULTIMEDIA OR MEDIA OR IMAG-
         63305
              E? ? OR PHOTO? ? OR PHOTOGRAPH? ? OR PICTURE? OR GRAPHIC? ? OR
               SCREEN? ? OR WEBPAGE? ? OR PAGE? ? OR WEBSITE? ? OR SITE? ? -
              OR AD OR ADS OR ADVERTIS??? OR ADVERTISEMENT? ?)
S7
          1571
                 (CHANG? OR NEW) (5N) (DIALOG() (BOX OR BOXES) OR (POPUP OR PO-
              P????()UP)(3N)(BOX OR BOXES OR NOTICE OR NOTICES OR NOTIFICAT-
              ION? ? OR ALERT? ? OR MESSAGE? ?) OR PROMOTION?? OR BANNER? ?
              OR SCENE? ?)
.S8
         2204
                 S1:S3(10N) (REPLAY? OR REWIND? OR REVIEW? OR RERUN????)
S9
                 (VIEW??? OR LOOK??? OR SEE OR SCAN???? OR PERUS??? OR BROW-
          777
             S? OR READ??? OR CHECK??? OR REPLAY? OR REWIND? OR REVIEW? OR
             RERUN????) (10N) S1:S3(10N) (LATER OR (ANOTHER OR OTHER OR DIFFE-
             RENT) (2W) TIME OR FUTURE OR AFTERWARD)
S10
          141
                S4 AND S8:S9 AND IC=G06F
S11
                S10 AND S5:S7
            3
S12
          138
                S10 NOT S11
S13
          60
                S12 AND IC=G06F-017
S14
                S12 NOT S13
           78
S15
           38
                S14 AND IC=G06F-015
S16. "
       40
                S14 NOT S15
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* T.T.E	740.EUKUPE	AN PATTERS 1978-2003 Nov W01
	(C) 20	US Euro an Patent Olisian
File	349: PCT FU	ĿĿTEXT 1979-2002/UB=∰∩∩数1106 เบ⊤=20031030
	(c) 20	03 WIPO/Univentio
	•	
Set	Items	Description
S1	792223	MULTIMEDIA OR MEDIA OR IMAGE? ? OR PHOTO? ? OR PHOTOGRAPH?
	? (OR PICTURE? OR GRAPHIC? ? OR SCREEN? ? OR CONTENT
S2	440614	WERPAGE? 2 OR PAGE? 3 OR DEPOSITE OF CONTENT
	O	WEBPAGE? ? OR PAGE? ? OR WEBSITE? ? OR SITE? ? OR AD OR ADS
	· · · ›	R ADVERTIS??? OR ADVERTISEMENT? ? OR PROMOTION?? OR BANNER?
s3	97884	DIALOCAL ADD POVERS OF TRANSPORT
		DIALOG() (BOX OR BOXES) OR (POPUP OR POP????()UP) (3N) (BOX OR
•	ME	OXES OR NOTICE OR NOTICES OR NOTIFICATION? ? OR ALERT? ?) OR ESSAGE? ?
S4 ·	98968	
, a		S1:S3(5N) (CAPTUR? OR RECORD??? OR SAV??? OR GRAB???? OR CO-
	OT 2	??? OR COPIE? ? OR SNAPSHOT? ? OR SNAP()SHOT? ? OR SCREENSH-
	01:	? ? OR SCREEN() SHOT? ? OR SCREENCAPTUR??? OR ACQUIR? OR ACQ-
S5	4001	SITION? ? OR TAK???(2W)PICTURE? ?)
S6		S4 (5N) (PERIOD? OR INTERVAL? ? OR TIMES OR EVERY (1W) OFTEN)
50		(CHANG? OR NEW) (5N) (CONTENT OR MULTIMEDIA OR MEDIA OR IMAG-
	8C	? OR PHOTO? ? OR PHOTOGRAPH? ? OR PICTURE? OR GRAPHIC? ? OR
	م م	CREEN? ? OR WEBPAGE? ? OR PAGE? ? OR WEBSITE? ? OR SITE? ? -
s7	3781	AD OR ADS OR ADVERTIS??? OR ADVERTISEMENT? ?)
٠.		(CHANG? OR NEW) (5N) (DIALOG() (BOX OR BOXES) OR (POPUP OR PO-
	TON	(??()UP) (3N) (BOX OR BOXES OR NOTICE OR NOTICES OR NOTIFICAT-
	101/	? ? OR ALERT? ? OR MESSAGE? ?) OR PROMOTION?? OR BANNER? ? SCENE? ?)
S8		
S9	11081	S1:S3(10N) (REPLAY? OR REWIND? OR REVIEW? OR RERUN????)
0,5		(VIEW??? OR LOOK??? OR SEE OR SCAN???? OR PERUS??? OR BROW-
	ט: משמ	OR READ??? OR CHECK??? OR REPLAY? OR REWIND? OR REVIEW? OR
	DEM	UN????) (10N)S1:S3(10N) (LATER OR (ANOTHER OR OTHER OR DIFFE-
S10	3619	T) (2W) TIME OR FUTURE OR AFTERWARD)
S10		S4(S)S8:S9
S12		S10 AND IC=G06F
		S11/TI, AB, CM
S14		S12 AND IC=G06F-017
S14 S15		S12 NOT S13 S4/TI,AB AND S11
S16		S17 NOT S12
		S16 AND IC=G06F-017
S18		S16 NOT S17
510	33	210 101 21/

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File 275:Gale Group ( white DB( M) 1983-2003/Nov 12
           (c) 2003 The Gale Group
 File 621:Gale Group New Prod.Annou. R) 1985-2003/Nov 13
           (c) 2003 The Gale Group
 File 636:Gale Group Newsletter D (T) 1987-2003/Nov 12
         (c) 2003 The Gale Group
 File 16:Gale Group PROMT(R) 199 003/Nov 12
          (c) 2003 The Gale Group
 File 160: Gale Group PROMT(R) 1972-1989.
          (c) 1999 The Gale Group.
 File 148:Gale Group Trade & Industry DB 1976-2003/Nov 13
          (c) 2003 The Gale Group.
 File 624:McGraw-Hill Publications 1985-2003/Nov 12
          (c) 2003 McGraw-Hill Co. Inc
 File
       15:ABI/Inform(R) 1971-2003/Nov 13
          (c) 2003 ProQuest Info&Learning
 File 647:CMP Computer Fulltext 1988-2003/Sep W3
          (c) 2003 CMP Media, LLC
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          (c) 2003 IDG Communications
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          (c) 2003 The Dialog Corp.
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          (c) 2003 Reed Business Information Ltd.
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          (c) 1999 Business Wire
 File 813:PR Newswire 1987-1999/Apr 30
          (c) 1999 PR Newswire Association Inc
 File 610:Business Wire 1999-2003/Nov 13
          (c) 2003 Business Wire.
 File 613:PR Newswire 1999-2003/Nov 13
          (c) 2003 PR Newswire Association Inc
 Set
         Items
                 Description
 S1
       7551313
                 IMAGE? ? OR PICTURE? OR GRAPHIC? ? OR SCREEN? ? OR CONTENT
              OR AD OR ADS OR ADVERTIS??? OR ADVERTISEMENT? ? OR BANNER? ?
S2
       1134373
                 DIALOG() (BOX OR BOXES) OR (POPUP OR POP????()UP) (3N) (BOX OR
               BOXES OR NOTICE OR NOTICES OR NOTIFICATION? ? OR ALERT? ?) OR
               MESSAGE? ?
s3
      ·· 348390
                 S1:S2(5N) (CAPTUR? OR RECORD??? OR SAV??? OR COPY??? OR COP-
              IE? ? OR SNAPSHOT? ? OR SNAP()SHOT? ? OR SCREENSHOT? ? OR SCR-
              EEN()SHOT? ? OR SCREENCAPTUR??? OR ACQUIR?)
S4
                 S3(5N)(PERIODS OR PERIODIC? OR INTERVALS OR TIMES OR EVERY-
              (1W) OFTEN)
S5
      1599737
                 (CHANG? OR NEW) (5N) (CONTENT OR MULTIMEDIA OR MEDIA OR IMAG-
             E? ? OR PHOTO? ? OR PHOTOGRAPH? ? OR PICTURE? OR GRAPHIC? ? OR
              SCREEN? ? OR WEBPAGE? ? OR PAGE? ? OR WEBSITE? ? OR SITE? ? -
             OR AD OR ADS OR ADVERTIS??? OR ADVERTISEMENT? ?)
S6
                 (CHANG? OR NEW) (5N) (DIALOG() (BOX OR BOXES) OR (POPUP OR PO-
             P????()UP)(3N)(BOX OR BOXES OR NOTICE OR NOTICES OR NOTIFICAT-
             ION? ? OR ALERT? ? OR MESSAGE? ?) OR PROMOTION?? OR BANNER? ?
             OR SCENE? ?)
S7
       310073
               S1:S2(10N)(REPLAY? OR REWIND? OR REVIEW? OR RERUN???? OR P-
             LAY????) ·
S8
       163277
                 (VIEW??? OR LOOK??? OR SEE OR SCAN???? OR PERUS??? OR BROW-
             S? OR READ??? OR CHECK??? OR REPLAY? OR REWIND? OR REVIEW? OR
             RERUN????) (10N)S1:S2(10N) (LATER OR TIME OR FUTURE OR AFTERWAR-
S9
        61083
                S3 AND S7:S8
S10
        23872
                S9 AND S5:S6
S11
           52
                S4(S)S7:S8(S)S5:S6 OR S4(100N)S7:S8(100N)S5:S6
S12 301
                RD (unique items)
S13
      3616767
                AD OR ADS OR ADVERTIS??? OR ADVERTISEMENT? ? OR BANNER? ?
        61622 S13(5N) (CAPTUR? OR RECORD??? OR SAV??? OR COPY??? OR COPIE?
S14
              ? OR SNAPSHOT? ? OR SNAP()SHOT? ?)
S15
      1181210
                 (VIEW??? OR LOOK??? OR SEE OR SCAN???? OR PERUS??? OR BROW-
             S? OR READ??? OR CHECK??? OR REPLAY? OR REWIND? OR REVIEW? OR
             RERUN????) (10W) (LATER OR TIME OR FUTURE OR AFTERWARD)
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